

Minutes of X3T11 HIPPI SWG, and HNF - Technical Committee (TC)
October 8, 1996
St. Petersburg Beach, Florida

1. Opening remarks and introductions

The Chairman, Don Tolmie of Los Alamos National Laboratory, opened the Technical Committee portion of the HNF meeting and thanked Charles Brill and AMP for hosting this meeting. This group is constituted as both the HIPPI special working group (SWG) under X3T11, and the HIPPI Networking Forum (HNF) - Technical Committee (TC).

Don lead a round of introductions. The list of attendees is at the end of these minutes.

2. Review / modify the draft agenda

Draft agendas were distributed via e-mail before the meeting for both the HIPPI-6400 specific portion, and the HIPPI general portion. Hard copies were distributed at the meeting. No changes were made at the meeting. These minutes reflect the approved agenda. Don Tolmie agreed to take the meeting minutes. Note that the minutes for the HIPPI-6400 specific meeting are separate.

3. Review Minutes of Previous Meeting

The minutes of the X3T11 HIPPI SWG / HNF - TC meeting of August 6, 1996, in Honolulu were reviewed. Joe Parker of Optivision moved, and Jeff Young of Cray Research seconded, to approve the minutes as written. Passed unanimously.

4. Review of old action items

The action items from the June, 1996, meeting were reviewed for the current status.

1. Michael McGowen of Essential Communications - Generate a HIPPI switch MIB. (Carryover, work is in progress)
2. Michael McGowen of Essential Communications - Update HIPPI-AC to work with HIPPI-SC and its recent changes. (Carryover)

3. John Renwick of NetStar - Check status of ARP over HIPPI RFC with Phil Cameron of Essential and see if we can get the document moving. (Carryover)
4. Tim Clay of Methode Electronics - Investigate a good test pattern for HIPPI-Serial optical components. (Carryover)
5. Don Tolmie of Los Alamos - Draft a Project Proposal for a revision of HIPPI-FP. (Done, see 12.2)
6. Don Tolmie of Los Alamos - Revise HIPPI-FP with the inclusion of a ULP-id for HIPPI-MP. (Carryover)
7. Everyone - Suggest changes to HIPPI-FP and bring in proposals for them. (Carryover)
8. Don Tolmie of Los Alamos - Place a call for changes to HIPPI-FP on the web page containing HIPPI-FP. (Done)
9. Greg Chesson of Silicon Graphics, and Jeff Young of Cray Research - Check on the status of the HIPPI end-point MIB, and if Mark Kelley is going to continue work on it. (Carryover, and re-assigned to just Jeff Young)
10. Greg Chesson of SGI - Work with Bob Pearson of Essential, and John Renwick of NetStar, on ARP and IP over HIPPI-6400. (Carryover, work is in progress)
11. Don Tolmie of Los Alamos - Check with John Renwick of NetStar as to the status of RFC 1374. (Carryover)
12. Roger Ronald of Raytheon E-Systems - Talk to the E-Systems people working on their HIPPI-6400 switch about Von's MIB and E-Systems MIB plans, and report back to this group. (Carryover)
13. Von Welch of NCSA - Update the HIPPI-6400 MIB to reflect the changes made to HIPPI-6400-PH at the Honolulu meeting. (Done)
14. Everyone - Review the HIPPI-6400 MIB. (Carryover)

5. HIPPI-Serial

5.1 Status of Public Review

HIPPI-Serial Rev 2.6 completed its first public review on September 17, 1996. The only comments (suggestions) came from the ANSI editor. Don Tolmie has incorporated most of the suggestions (all editorial, no substantive changes were made) into Rev 2.7. Don took an action item to shepherd HIPPI-Serial Rev 2.7 through X3T11 and the final ANSI approval process. The standards document, when it is approved, should be numbered ANSI X3.300-1996. No comments have been received from the ISO processing path.

The changes were reviewed, and by a unanimous vote the changes were accepted and the revised document forwarded for further processing.

6. IETF related items

6.1 IP over HIPPI, RFC 1374

Nothing new at this meeting. Don Tolmie took an action item to check with John Renwick as to the current status.

6.2 ARP over HIPPI

Greg Chesson has an action item to work with Bob Pearson of Essential, and John Renwick of NetStar, on ARP and IP over HIPPI-6400. Nothing new was reported at this time.

6.3 HIPPI end-point MIB

Mark Kelley of Cray Research was implementing a MIB, but was not done as of the February '96 meeting. Jeff Young has an action item to see if Mark Kelley was going to continue, and the status of the document.

6.4 HIPPI switch MIB

Michael McGowen of Essential Communications has an action item to develop this document. Bob Pearson reported that Mark Dopke of Essential is working on it. Roger Ronald suggested looking at the NetStar MIB, and noted that it is available from the NetStar ftp site.

6.5 HIPPI-6400 MIB

Von Welch of NCSA updated his HIPPI-6400 End-Point MIB for compliance with HIPPI-6400-PH Rev 0.6. The MIB was distributed via the web page before this meeting. Von asked that people review the MIB and send comments to him.

7. HIPPI-AC (Auto Configuration)

7.1 HIPPI-AC document status

There continues to be interest in pushing this topic, as an ANSI standard or as an HNF document. Roger Ronald noted that he had used HIPPI-AC concepts in HIPPI-6400-SC.

8. HIPPI-SC (HIPPI-800 Switch Control)

8.1 Status of Public Review

Like HIPPI-Serial, HIPPI-SC Revised, Rev 3.1, completed its first public review on September 17, 1996. The only comments (suggestions) came from the ANSI editor. Don Tolmie has incorporated most of the suggestions (all editorial, no substantive changes were made) into Rev 3.2. Don took an action item to shepherd HIPPI-SC Revised, Rev 3.2 through X3T11 and the final ANSI approval process. The new standards document should be numbered ANSI X3.222-1996. No comments have been received from the ISO processing path.

The changes were reviewed, and by a unanimous vote the changes were accepted and the revised document forwarded for further processing.

9. HIPPI API (Application Programming Interface)

9.1 Status of current work

It was reported that HP and SGI will have people working on the API. The HIPPI Networking Forum (HNF) Board of Directors has sent letters to X/Open and the ATM Forum to see if there is common work and interest. Francois Gaullier is the HIPPI contact.

10. HIPPI-ATM (Mapping to Asynchronous Transfer Mode)

10.1 Status of Public Review

Like HIPPI-Serial and HIPPI-SC Revised, HIPPI-ATM Rev 1.7, completed its first public review on September 17, 1996. The only comments (suggestions) came from the ANSI editor. Don Tolmie has incorporated most of the suggestions (all editorial, no substantive changes were made) into Rev 1.8. Don took an action item to shepherd HIPPI-ATM Rev 1.8 through X3T11 and the final ANSI approval process. The standards document, when it is finally approved, should be numbered ANSI X3.299-1996. No comments have been received from the ISO processing path.

The changes were reviewed, and by a unanimous vote the changes were accepted and the revised document forwarded for further processing.

11. HIPPI-MP (Multiple Path)

11.1 Status of current work

HIPPI-MP, which stands for "Multiple Path", is intended to provide higher speed transfers by striping, using current HIPPI interfaces and switches. Don Tolmie, the document editor, reported that he is holding off on updating the original draft so that it may be aligned with the verbiage and techniques used for HIPPI-6400-PH Scheduled Transfers. Greg Chesson expressed the need for techniques to setup multiple HIPPI-6400 Virtual Connections.

12. HIPPI-FP (Framing Protocol)

12.1 Suggested changes for revisions

With work on HIPPI-MP proceeding, a ULP-id for -MP is needed in -FP. At the 1996 April meeting, a vote to 'revise' HIPPI-FP passed, and a call for other changes was issued. As reported in the April minutes, the proposal to remove the "Offset" parameter was dropped when it was discovered that Hewlett-Packard used the feature. No other changes have been proposed.

12.2 Plans for revision

The 5-year standards anniversary has been reached, we must now (1) 'reaffirm' the current standard without changes, or (2) revise the document, or (3) withdraw the standard. Don Tolmie presented a draft Project Proposal for a revision to HIPPI-FP. The draft was reviewed; no changes were made. Roger Ronald of Raytheon E-Systems moved, and Henry Brandt of IBM seconded, to forward the revised Project Proposal to X3T11 for further processing. Motion passed, 11 for, 0 opposed. Don Tolmie took an action item to submit the Project Proposal to X3T11.

13. HIPPI-PH Reaffirmation

13.1 Status of X3T11 processing

Don Tolmie reported reaffirmation, without change, of ANSI X3.183-1991, (HIPPI-PH) should be finalized in December of this year.

14. HIPPI-6400

14.1 Interim Working Group report

Special working meetings on HIPPI-6400 were held September 11-12, in Albuquerque, NM, and October 7 in St. Petersburg at the same location as this meeting. Work on HIPPI-6400-PH and HIPPI-6400-SC progresses, and work on copper and fiber media for -PH is underway. See the separate minutes for these meetings for further details.

14.2 Status of Patents

Hewlett-Packard previously supplied a letter defining HP's release of the 4b/5b coding for use in HIPPI-6400, and has been asked to complete the ANSI patent release form.

HP also claimed that the HIPPI-6400 Scheduled Transfer infringed on HP patents. Greg Chesson had previously supplied HP with examples of what may have been prior art that would convince HP to drop their claim, but that has not happened. Francois Gaullier felt that HP would soon supply an ANSI patent release and define the terms and conditions. It was noted that while the HP patents might be successfully challenged, it was probably not worth the effort and cost based on the expected fee that HP would charge.

14.3 Processing status of SD-3 for HIPPI-6400-SC

The X3 Letter Ballot on the SC-3 Project Proposal for HIPPI-6400-SC closes October 21, and no snags are expected.

15. Other items

No other items were introduced.

16. Future meeting schedule

16.1 November 6-7, Phoenix, AZ

The meeting will cover HIPPI-6400 issues, with emphasis on copper on Thursday afternoon.

Wednesday, November 6 — 1 PM - 9 PM

Thursday, November 7 — 8 AM - 5 PM

The location is on the Courtyard by Marriott at the Phoenix Airport. Chris Olson and Lockheed Martin are the host. (See the meeting announcement on the web page at <http://www.cic-5.lanl.gov/~det/> for further details.)

16.2 December 2-3, 1996, Minneapolis, MN

During the X3T11 December plenary week, the following HIPPI meetings are scheduled:

Monday, December 2 -
9 AM - 9 PM — HIPPI-6400

Tuesday, December 3 -
8 AM - 9 AM — HNF Plenary
9 AM - Noon — HIPPI-TC General and -6400
1 PM - 9 PM — HIPPI-6400 Optical (with connector presentations)

The location is the Embassy Suites, 79301 34th Avenue South, Bloomington, MN. Horst Truustedt and IBM are the host. (See the meeting announcement on the web page at <http://www.cic-5.lanl.gov/~det/> for further details.)

16.3 Future meeting dates and locations

The following 1997 X3T11 plenary week dates are firm (except for December which may be shifted one week later to avoid the Thanksgiving holiday). Recent changes to this list are underlined to make them easier to find.

1997 -

Jan 8-9	Interim	Phoenix, AZ	Lockheed
Feb 3-4	Plenary	San Jose, CA	Sun
Mar 5-6	Interim	<u>Phoenix, AZ</u>	Berg
Apr 7-8	Plenary	Palm Springs, CA	Brocade
May 7-8	<u>Interim</u>	<u>Mt. View</u>	<u>SGI</u>
Jun 9-10	Plenary	Seattle, WA	Boeing
July 9-10	<u>Interim</u>	<u>Minneapolis, MN</u>	<u>Cray</u>
Aug 4-5	Plenary	Honolulu, HI	Hitachi
Oct 6-7	Plenary	Tucson, AZ	FSI
Dec 1-2 ?	Plenary	Orlando, FL	DPT

The 1998 schedule is less firm, but here is what is currently being considered by X3T11 for the plenary meetings. Question marks note the ones that are still in question. Hopefully HIPPI-6400 will be far enough along that we will not need interim working meetings.

1998 -

Feb 9-10	Plenary	San Diego	<u>Qlogic</u>
Apr 20-21	Plenary	Palm Springs, CA	Brocade
Jun 8-9	Plenary	<u>St. Petersburg</u> <u>Beach, FL</u>	AMP
Aug 10-11	Plenary	??	??
Oct 5-6	Plenary	Tucson, AZ (?)	FSI (?)
Dec 7-8	Plenary	<u>Ft. Lauderdale, FL</u>	<u>Adaptec</u>

17. Review action items

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2. Jeff Young of Cray Research - Check on the status of the HIPPI end-point MIB, and if Mark Kelley is going to continue work on it.
3. John Renwick of NetStar - Check status of ARP over HIPPI RFC with Phil Cameron of Essential and see if we can get the document moving.
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7. Tim Clay of Methode Electronics - Investigate a good test pattern for HIPPI-Serial optical components.
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9. Everyone - Suggest changes to HIPPI-FP and bring in proposals for them.
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11. Everyone - Review the HIPPI-6400 MIB.
12. Don Tolmie of Los Alamos - Shepherd HIPPI-Serial Rev 2.7 through X3T11 and the final ANSI approval process.
13. Don Tolmie of Los Alamos - Shepherd HIPPI-SC Revised, Rev 3.2 through X3T11 and the final ANSI approval process.
14. Don Tolmie of Los Alamos - Shepherd HIPPI-ATM Rev 1.8 through X3T11 and the final ANSI approval process.
15. Don Tolmie of Los Alamos - Present the Project Proposal for HIPPI-FP revision to X3T11 for further processing.

18. Continue work on HIPPI-6400

We were able to finish the main agenda at 10:40 am, so continued on HIPPI-6400 items until 3 PM. See the HIPPI-6400 minutes for details. A HIPPI-6400 meeting addressing fiber media followed from 3 PM - 6:30 PM. Vince Melendy of Methode volunteered to take the minutes of this part of the meeting, which are recorded separately.

Notes from X3T11 Plenary following the HNF-TC

The X3T11 Plenary met the next day, i.e., October 9. HIPPI related items are reported here for your convenience, the definitive record is the X3T11 minutes.

It was agreed that the Project Proposal for revising HIPPI-FP will be in the next X3T11 mailing, and X3T11 will vote on it at their December meeting.

The changes made to HIPPI-ATM, HIPPI-Serial, and HIPPI-SC as a result of the ANSI editor's suggestions were reviewed. By the following roll-call votes (for-opposed-absent) the changes were approved - the documents will be forwarded for further processing by X3 and BSR. HIPPI-ATM (52-0-19), HIPPI-SC (54-0-17), HIPPI-Serial (54-0-17).

Attendance

Terry Bittner	AMP
Kirk Bovill	AMP
Ed Cady	Berg
John Ellis	Berg Electronics
Jeff Young	Cray Research
Bob Willard	Digital Equipment Corp
Bob Pearson	Essential Communications
Randy Hardy	Harris
Francois Gaullier	Hewlett-Packard
Henry Brandt	IBM
James Hoffman	Los Alamos National Lab
Don Tolmie	Los Alamos National Lab
Dan Schwartz	Motorola
Von Welch	NCSA
Yasuo Sasaki	NTT International Corp.
Joe Parker	Optivision
Michael Leib	Pulse/Technitrol
Craig Davidson	Raytheon E-Systems
Roger Ronald	Raytheon E-Systems
Greg Chesson	Silicon Graphics
Hansel Collins	Silicon Graphics
Don Sanders	Silicon Graphics